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ABSTRACT

Universities in two social settings may independently orient themselves to public service obligations and/or restructure the university system along similar lines to provide the information services demanded. Yet, with the achievement of the information systems capacity in agricultural colleges in the United States and with contracts and idea exchange between these universities the presence of an information systems capacity is more likely to be the product of diffusion than of independent invention. Some specific concepts are more acceptable than others and some are also more acceptable in one social setting than in others. Q-methodology, a method of opinion analysis that deals with priorities, provides insight into the priorities of the social sciences faculty at Columbia campus of the University and at NTU and Chunghsing Universities in Taiwan. Assessing diffusion by noting the deviation of item ratings from their ideal, typical placement in the Q-sorting seems to be useful. Generally, speaking, the social scientists on the Columbia campus rated basic landgrant concepts more favorably than those on the Taiwan campus. (Author/KE)

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THE COMPARATIVE DIFFUSION OF LAND GRANT UNIVERSITY CONCEPTS IN A MIDWESTERN U.S. AND TWO TAIWAN UNIVERSITIES

5/30/75

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This paper defines and assesses the conceptual acceptance of basic land grant (people university) views by the social science faculty on three campuses (Columbia Campus of the University of Missouri and NTU and Chunghsing Universities in Taiwan). Socialization into the constructed land grant university ideal view type and relative placement of specific discriminating views in relation thereto are used as diffusion indicators. Integration of the land grant university views into the universe of other ideas about what a university should be and do is considered. Implications for the organization and operation of public universities are noted.

1. Historical Perspective

A major step in achieving the ideal that a university education should be available for "ordinary people" and that the knowledge developed in universities should be available to the public was made with the passage of the Morrill Act (1862) by the U.S. Congress. This act provided for publicly supported universities charged with teaching agriculture and the mechanic arts to people in the respective states. When it ultimately became necessary to provide for research to develop the knowledge needed for the teaching charge, experiment stations were added to the university. Up to this time farming had been regarded as a matter of folk knowledge and practice. Few people thought that anything useful about farming could be obtained from books. Indeed, considering the state of scientific knowledge about farming that existed at that time, this belief had considerable truth. However, as the potentially usable scientific information about farming became available from agricultural

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research it tended to accumulate in the files and publications of the faculty instead of being disseminated to the intended users. To correct this, a cooperative extension service in which local communities, the federal government, and the state participated was provided. This too was made a university responsibility and put under its control. All of this was in addition to the more conventional resident teaching activity through which research knowledge could be disseminated to students.[1]

With the addition of the extension function, the university thus had developed a capacity for extending the basic science knowledge base from which most new technological developments ultimately must come and for transforming research findings into potentially useful innovations for user clienteles. Innovations developed there could then be tested for local adaptability and finally through the extension service transmitted to the consuming public (Kellogg and Knapp, 1966).

Along with the research, extension and resident teaching trio and tangible organizational features, a belief system or philosophy gradually developed that made it possible for the university to achieve its service obligations to society, then mostly farmers. The very high productivity of individually managed farms in the United States is evidence of the success with which the informal needs of farmers was provided.

With the integration of the three activities into a single system, a social invention had emerged with a capability for developing and disseminating specialty information for whatever purpose. This organizational arrangement attracted the attention of countries concerned with agricultural development the world over. It was borrowed and transferred often with the enthusiastic assistance of U.S. technicians. Likewise, in this country, the system was

examined with interest by those concerned with such applied concerns as public health, community development, and education.

In 1962 the University of Missouri, Columbia Campus pioneered in extending the original land grant university charge to all divisions and departments (Longwell, 1970). In the development process a tendency to academic elitism also emerged in some divisions of which arts and science colleges were typical. The faculty in some were initially and have tended to remain oblivious to the original land grant university charge and quite devoid of any feeling of need to cater to the informational needs of the public. Even so, information dissemination in a sense became institutionalized as a university function through the establishment of professional schools oriented to the applied concerns of education, journalism, business, forestry, social work, engineering, and medicine. Yet, some academicians have continued to question whether such schools should be a part of the university system, the reasoning being that their presence tends to compromise the critical pursuit of knowledge.

Except for a number of economists and a few sociologists who became attached to the agricultural colleges and were willing to accept the "rural" designation, others, by far most numerous, were recruited into the arts and science divisions of the respective universities. No formal extension obligations or rewards were provided. Indeed, for some the public seemed to be a negative reference group because they too posed a threat to the critical pursuit of academic knowledge.

Academic elitism seemed to pervade Taiwan universities from their inception. Learning and intellectual excellence has been of central importance in Chinese culture for centuries. Universities have tended to insure enhancement

of this central value. Even today only intellectually superior students are admitted to universities. Graduate programs and institutes for research have been provided for some academic disciplines but only recently has a formal extension activity been added on an experimental basis in a single university.

The National Taiwan University, at the top of the prestige hierarchy, dates back historically to 1928 when it was established as Taihoku Imperial University by the Japanese. With their departure (1945) it was accorded its present name. It is typically dedicated to teaching and research. At the request of the PDAF it offers a one week short course for all agricultural extension workers entering the service each year. Also, some of the agricultural faculty have contacts with agencies concerned with utilitarian matters. Participation of the College of Agriculture in a contractual arrangement with U.S. agricultural colleges (University of California and Michigan State University) provided an opportunity for land grant university philosophies and concepts to diffuse to the agricultural college, mainly through faculty exchange and graduate education. Although other divisions in the university interface with public agencies and have exchange arrangements with U.S. land grant universities, the opportunity for the diffusion of the basic concepts was limited partly because these have not diffused generally to non-agricultural divisions in the U.S. universities.

Chunghsing University, established as a provincial college in 1961, had emerged as a university with 19 departments and nine graduate institutes by 1973. All offered masters degrees. Unlike its more prestigious counterpart, an agricultural extension function was added to the College of Agriculture in 1966. Specified departments including agricultural economics were charged with the responsibility of disseminating available information to non-student user clienteles. This effort was experimentally supported by the

Joint Commission on Rural Reconstruction (Tsiang, 1964).

2. Method of Analysis

Two central and one supplemental methodological problems were posed in this study. The major ones had to do with (a) determining and defining what the land grant university (people's university) concepts are, and (b) devising an appropriate means for assessing the nature and extent of their diffusion in the context of already existing ideas about what a university should be and do. The supplemental problem had to do with defining types of persons in terms of views held about appropriate university roles and functions. These are considered in order.

Definition of People (Land Grant) University Concepts

Although much has been said about alleged distinctive land grant university concepts and much effort has been directed to their diffusion to new social settings, the basic concepts have been more assumed than defined. When asked to define them, proponents are generally unable to readily do so.

The procedure here was to first define the universe of views that knowledgeable people held about what a university should be and do and to obtain a representative sample of these views. This view sample in turn fulfilled a three-fold function; namely, it (1) provided a basis for defining types of persons in terms of what they thought a public university should be and do, (2) provided an idea base from which to pick those distinctive of land grant universities, and (3) defined the universe of views about university role and function into which land grant university concepts, relatively new in point of time, were diffused.

The Idea Universe. Obtaining such a sample required extensive reading of written documents on university roles and functions, in depth interviews with students, faculty and administrators on the Columbia Campus known or thought

to have divergent views on the subject, interviews with faculty and administrators involved in efforts to disseminate land grant type universities and concepts to other countries, own experience in this effort, and reports of critics and policy committees on university role and function both in this country and elsewhere. From an international perspective, views were obtained from sources in India, Taiwan, Colombia, Brazil, Denmark, The Netherlands, and the People's Republic of China, also from the authors' experiences in working with agricultural development programs and universities in India and a comprehensive study of the farm information development, transformation, dissemination system in Taiwan in which universities were a part (Lionberger and Chang, 1970). (See Appendix Table 1 for a list of the views.)[2]

The distinctive concepts. The next step was to determine which of the 72 ideas included in the sample are distinctive to land grant universities. For doing this,options were limited. A historical approach would require examination of documents setting forth the original charge and subsequent directives to perfect the system but would miss the ideas and concepts that emerged in the process of development which in turn were transmitted informally through the socialization of the faculty in these universities. Writings of those who critique such universities, another option, suffer from a general inclination to assume rather than define what the concepts really are other than those having to do with obvious organizational issues and "people philosophy." Finally reliance could be placed on insights of knowledgeable administrators and academicians who are currently associated with land grant universities. This approach, the one chosen, assumes that the concepts exist mostly in the minds of knowledgeables and actual participants in the system. The researchers further assumed that knowledgeables could identify the basic concepts from the view sample and could add others if

needed. Since a number of persons on the Columbia Campus were regarded as authorities on land grant universities and since there were others who had actively been involved in diffusing these to other countries, the authors felt no need to look beyond the Campus for definers.[3]

Even though knowledgeables on the subject were well known to the researchers, a more guarded approach was used; namely, reliance on ten persons regarded as knowledgeables who were requested to name three on-campus persons whom they thought most typified the land grant university view as it exists today. The eight persons who were named three or more times were selected as the definers. They in turn specified 16 concepts from the 72 as central to the land grant university complex (see Table 1). No additional concepts were suggested by the definers. Although designation of a view as qualifying by four out of seven definers available for this purpose was regarded as sufficient, most items were designated with near concensus.

The eight knowledgeable definers were then asked to sort the 72 items which included the 16 labeled as distinctive to land grant universities -- Q-sort style -- in terms of what they thought a land grant university ideally should be and do. The placement of the views labeled as distinctive in the most disagree-most agree arrangement then became the construct from which socialization into the land grant university way of thinking and the diffusion of concepts were measured.[4]

Measuring Diffusion

Here two major considerations were at issue. One had to do with the nature and complexity of the innovation being diffused and the second with how the concepts became integrated into thought patterns of the acceptors. We were first of all confronted with conceptual, not overt acceptance of an innovation, and acceptance of an interrelated set of organizational, functional and normative concepts of varying centrality and cruciality to the operation of a

TABLE 1

AVERAGE SCORE THAT THE COLUMBIA AND TAIWAN SOCIAL SCIENCE FACULTY ASSIGNED TO LAND GRANT UNIVERSITY CONCEPTS AND THE RATINGS OF THE DEFINERS CLASSIFIED BY TYPE OF CONCEPT

Types / Concepts	Average Ratings Assigned by		
	The Definers	Columbia Campus Social Scientists	Taiwan Campus Social Scientists
INFORMATION SYSTEM			
The university should be a sanctuary for the greatest diversity of thought, the freest exchange of ideas, the most painstaking search for truth and thus a repository of scientific knowledge second to none. (3)	5.1	4.1	3.7
Participate in creating a system of communication and idea exchange among basic scientists throughout the world. It is at this level of knowledge and theory that cross-cultural transfer of ideas is most possible. (45)	3.3	3.3	2.9
Provide for integrated research, resident teaching and extension programs that supplement and draw upon each other. (37)	3.9	3.0	3.1
Universities must be a true knowledge system, in which highly abstract information developed in the university is transformed and flows downward to all points of practical concern to people. (42)	3.5	2.6	1.9
Extension, research and resident teaching must be organizationally a part of the university and under its control. (44)	3.3	1.6	1.9
Provide two-way traffic of ideas and influence between the university and the people of the state largely through contacts with them, both direct and indirect. (39)	3.9	2.7	1.6
Leave testing of innovations for local adaptability to persons and agencies. It is a waste of university faculty time to be concerned with such matters. (40)	-2.3	-1.4	-2.6

Types / Concepts	Average Ratings Assigned by		
	The Definers	Columbia Campus Social Scientists	Taiwan Campus Social Scientists
SERVICE			
Create an understanding of the change forces and conditions that are operating in our society and the consequences of what we seem to be inadvertantly becoming. (58)	3.6	3.4	2.0
Find solutions to the major economic, social and political problems of the day and provide guidance for future policies and action. (50)	3.1	2.2	2.6
Should not provide continuing education for adults outside the university. This should be left to other agencies. (48)	-4.3	-2.2	-2.1
Participate with state and federal agencies in helping communities improve their economic and social conditions. (56)	2.9	2.1	1.3
Information derived from its research should be freely accessible to all. Limited access agreements have no place in a university. (63)	3.3	3.3	1.6
Has a special obligation to extend its knowledge and services to economically disadvantaged ares and people in the state. (65)	2.6	1.9	0.7
Scholars in a university should be expected to work on research projects of applied concern even though the needed research is not what challenges them most. (10)	0.4	-1.2	0.9
PEOPLE ORIENTATION			
Be committed to the proposition that there are extraordinary possibilities in ordinary people. (34)	4.1	2.5	1.0
Be concerned only with highly competent students, academically. It is a waste of resources to try to educate the less capable students in a university. (6)	-4.2	-2.1	-1.7

university. Thus, some means of placing specific views into the total context with importance dimensions attached was needed. The rationale is that of those things that are important, some are more so than others; and of those that are unimportant, some are likewise more unimportant than others; also that the importance of any single item is relative to the importance of the other concerns that are at issue.

Inclusion of the new into the already existing views involves an integration issue concerning which anthropologists, but not "diffusion researchers," have been generally cognizant (Linton, 1936; Malinowski, 1928, 37). Even the acceptance of a simple idea is a matter of fitting it into an already existing belief system. Thus, some scheme which would permit an assessment of how new ideas were fit into the context of the old was needed.

Two diffusion indicators, both novel to diffusion research, were used. One was very general and the other quite specific as to the concepts involved. The first addressed the question of whether and to what extent the social science faculty were socialized into the land grant university way of thinking. The general criterion was the degree to which faculty view types approximated a constructed land grant university ideal type. Use of this measure required prior definition of what these thought types were, (2) what the land grant university ideal thought type is, (3) whether any of the types tended to be of that type, and if so, how many of the faculty tended to be of that type.

To determine existing typologies of thinking about university role and function into which the social science faculty could be classified, a diverse sample of students, faculty members, and administrators, one on the Columbia Campus and one on the Taiwan university campuses were asked to Q-sort the 72 university role and function statements in terms of their relative agreement or disagreement with them.

The Q-sorts from the Columbia and Taiwan campuses which were then separately factor analyzed by the principle-axis method and hand rotated yielded three view types for each cultural setting (Kerlinger, 1967). These were then examined in relation to the land grant university ideal and the social science faculty on the two campuses classified in terms of their respective types. This provided a general indicator of the degree to which the faculties on the two campuses were socialized into particular ways of thinking about what a university should be and do.

The first requirement was to arrive at a judgment as to whether any of the abstracted types closely approximated the land grant university constructed ideal type. This was done by comparing where the views labeled as distinctive of land grant universities were rated in the Q-sort by the knowledgeable definers with where each of the faculty types rated them. The agreement-disagreement judgment, in this case, was rendered in terms of the total of the 16 item rating. A gross assessment was all that was necessary because deviations of nearly all of the types from the ideal were very large. Refinement of the measuring technique was not regarded as necessary. The next step in this procedure was to determine how many of the faculty on each of the campuses tended to be of each type.[5]

The second diffusion indicator started with the position in the Q-sort that the eight knowledgeable definers placed each of the 16 views labeled as distinctive of a land grant university as the reference point for assessing diffusion. Judgments in regard to specific items were made in terms of the direction and magnitude of the deviation of ratings assigned by the social science faculty in the two campus settings. From these ratings it could be determined whether a particular view (concept) was relatively more or less acceptable than its placement in the ideal sort. These ratings and deviations are reported in Table 1 and graphically illustrated in Figure 1.

The Faculty Interviewed

An attempt to include all social science faculty in the various divisions in the University of Missouri, Columbia Campus and the two Taiwan universities (National Taiwan and Chunghsing) fell short by an estimated ten percent on the three campuses. The range was from complete participation in several departments to near complete refusal in Anthropology and perhaps no more than half in the Psychology Department on the Columbia Campus. Departments on the last included General and Rural Sociology, Economics, Agricultural Economics, Political Science, Regional and Community Affairs, Psychology, and Anthropology. In the Taiwan universities, departments of Psychology, Agricultural Education, Public Health, Political Science, Agricultural Economics, Agricultural Extension, Economics, Sociology, and Anthropology were included.

Each faculty member was asked to place the 72 views about university roles and functions in a Q-sort arrangement indicative of his agreement or disagreement with them as appropriate for the functioning of a public university.

Expected Findings and Rationale

The diffusion context of this study derives from the origin and perfection of U.S. land grant universities and related concepts mainly in agricultural colleges and the diffusion of these universities to other social settings -- in this case the social science faculty on the University of Missouri, Columbia

Campus and two Taiwan universities (National Taiwan and Chunghsing).

Several expectations in the nature of general hypotheses were implicit in the analysis; namely:

1. That a faculty view type closely approximating the land grant university ideal would emerge and that at least some of the social science faculty would ascribe to this way of thinking.

2. That there would be a general acceptance of the land grant university concepts but this would be higher among the social scientists on the Columbia Campus than the Taiwan campuses.

3. That the concepts most compatible with the academic elitist view of what a university should be and do would be more strongly accepted than those catering to the informational needs of the public (Havelock, 1971, Chapter 3; Reiff, 1961).

The reasoning in regard to hypothesis one was that the faculty, many of whom received advanced degrees from land grant universities and who were currently employed in them would become, if not already, socialized into views (concepts and philosophy) regarded as central to such social systems.

Since the social scientists on this campus were closer to the source of origin of these concepts than those on the Taiwan campuses, they were expected to be more receptive to them (i.e., the distinctive concepts).

Finally, with the inclination of academics to defer to either own kind in thought and action and their elitist definition of what constitutes academic excellence, greater acceptance of concepts compatible with this position than those having to do more with servicing the informational needs of the public was expected.

3. Findings

In presenting results from the research we have first described findings from the preliminary researches that made an assessment of diffusion of concepts possible and second, those that indicate the nature and extent to which the concepts were diffused to the social science faculties on the

Columbia (USA) and Taiwan campuses using the two diffusion measures.

The first (preliminary researches) includes: (1) definition of the view types, and (2) definition of the land grant university ideal type and component views.

From the Preliminary Studies

Here we must ask the forebearance of the reader in presenting a long but at the same time dangerously abbreviated description of the abstracted thought' typologies about what a public university should be and do and a much shorter description of the land grant university ideal type.[6] Doing both is required for assessing diffusion by the "socialization" method and the last for assessing diffusion of specific concepts -- the second indicator.

View Types Abstracted. The factorial analysis and hand rotation of the Q-sorts of sub-samples of students, faculty and administrators in the two university complexes (Columbia Campus and Taiwan) yielded three characteristic thought patterns of types in each of the social settings. The authors descriptively designated the three Columbia Campus types as Academic Elites, Society Servants, and Land Grant University Traditionalizers; and those on the two Taiwan campuses as Subservient Servants (of society), Autonomous Critics, and Critical Servants (of society).

On the Columbia Campus. First of all there was more agreement than disagreement on appropriate university roles and functions. All were quite strongly agreed that the university should operate as a knowledge system, i.e., with a capacity to extend the frontiers of basic science knowledge and translate it into usable practice, that it should participate in creating an understanding of social change forces and conditions, and of their societal consequences with feedback from the people in the state on the one hand, and

exchange among basic scientists throughout the world on the other.

Although less strongly, they also quite generally felt that the university should provide for integrated research, resident teaching, and extension programs that supplement and draw upon each other; and that there are extra-ordinary possibilities in ordinary people.

Although mildly favorable to university participating with state and federal agencies in helping communities improve local economic and social conditions and to providing continuing education, they were strongly opposed to promoting government plans, national unity, and to exercising parental type control over students.

academic elites. This type of person was most distinguished by a very high emphasis on a university being a sanctuary of thought, diversity and free exchange of ideas, painstaking search for truth, and becoming a repository of knowledge second to none. They were negative to a major emphasis on now happenings, real life experiences and the like. Although they shared with others the view that the university should have a capability of translating theoretical knowledge into usable practice and in having integrated research, resident teaching and extension programs that draw upon each other, they regarded this distinctly secondary to such scholarly pursuits as bold experimentation in the areas of human relationships, theory testing, and understanding change forces occurring in society. Thus, to them unrestrained pursuit of truth with a political stance toward the existing institutional arrangements was a requirement. This, of course, was not to imply that they were necessarily anti-establishment in the sense of the new left. Critical inquiry was a priority consideration.

society servants. This group proposed a "down-to-earth," "here and now" university orientation which favored sending professors to the field periodically for educational updating and orientation and a strong negative stance to protecting radicals within the university from reactionary forces both inside and outside.

They were opposed to an open university idea, assuming special educational obligations to the economically disadvantaged, to lowering standards that would enable the less academically qualified to survive in the system. In general, to them, meritocracy prevailed over humanitarian considerations and a critical stance toward existing social institutions.

land grant university traditionalizers. They held that each faculty member should be involved in research, teaching and extension activities and that organizationally these should be under the control of the university. This was rated above the functional integration of the three. Although not adamant, they were favorable to the faculty spending time in the field occasionally, for educational direction and orientation.

They, with other types, agreed that universities must first of all be free to exercise the greatest diversity of thought and knowledge accumulation in society second to none. Furthermore they favored bold experimentation in the field of human relations even though they were distinctly opposed to the society critic role, thus making them distinct in this last respect. Yet they were not proponents of subservience to society nor were they inclined to hide behind a shield of insularity in cases when public disfavor is incurred. Rather, they clearly preferred to follow a sufficiently cautious path to make the need for such escape unnecessary.

On the Taiwan Campuses. Consensus views on which there were either strong, positive or negative feelings were manifest but were fewer than on the Columbia Campus. Yet, they with their United States counterparts, felt that a university should be a sanctuary for the greatest diversity of thought, the freest exchange of ideas, and the most painstaking search for truth and thus to becoming a respository for scientific knowledge second to none. They also agreed that the university is not at its best when it is indulgent and amused, seeking to know but not to moralize, and somehow vague rather than ready with absolute answers nor that it should be like an industrial firm with students as customers and degrees for sale. They, with their American counterparts, were generally opposed to universities serving as staging areas for revolution and revolutionaries although the critical servants were only very mildly so. But unlike their American counterparts none were particularly impressed with the idea that there are extraordinary possibilities in ordinary people. Otherwise consensus was mostly confined to matters in which strong feelings were not held either way.

subservient servants of society. This type strongly felt that universities should promote a sense of national unity and consciousness and that research done by the faculty should be mainly determined by the social, political, and economic needs of the state. A somewhat less strongly held positive view was that the university should help preserve and communicate the basic values of the society -- religious, moral, social, economic, and political.

A kind of public utilitarianism was indicated by a favorability to teaching now happenings and real life experiences to a faculty member being teacher, researcher, and extension worker and with the autonomous critics that the university also should provide for an integrated research, teaching and extension program that mutually support and draw upon each other; that

the three should be organizationally a part of and under control of the university making them as a group distinctive in this regard. They likewise favored university participation in creating a system of communication and idea exchange among basic scientists throughout the world. Quite in line with an extension philosophy they were favorable to continuing education for adults outside of the university. Their subservient stance was further manifest in their negative reaction to protecting radicals on campus and to their tolerance of professional schools on campus. Strangely, they more than any other group were against using resources to educate less capable students in the university setting.

autonomous critics. Autonomous critics were strongly committed to creating an understanding of the change forces and conditions operating in our society and the consequences of what we seem to be inadvertantly becoming, to experimenting boldly in the whole area of human relations seeking to modify existing institutions and discover workable new ones presumably to provide guidance for future policies and action. In the final analysis to them a university should become a true knowledge system in which the highly abstract information is developed in the university, is transformed and flows downward to all points of practical concern to people, sameto be operationalized in an integrated research, resident teaching, and extension program.

critical servants of society. They were perhaps most distinguished by a feeling that a university should participate with state and federal agencies in helping communities improve their economic and social conditions. They shared with others the view that a university should be a sanctuary for the greatest diversity of thought and thus a repository of knowledge second to none but for a utilitarian purpose, i.e., creating an understanding of the change forces and conditions that operate in society and (with Type One

respondents) finding solutions to the economic, social and political problems of the day. This, they held, should be done through an integrated research, extension and resident teaching program with local adaptive testing also included as a legitimate university function. An egalitarian position in regard to both staff and others was suggested by more than average opposition to the contention that the faculty should remember they are university employees and should be guided accordingly and with Type Two to exercise control over the personal lives of students somewhat comparable to what parents would expect.

In general, Type Three respondents had a commitment to service to society basically through intellectual inquiry and serving as objective critic and contributor to finding answers to problems and issues of the day. This they would insist is within the context of unrestrained development of a university as a knowledge center second to none.

The Land Grant University Ideal Type. Basically and officially land grant universities have the capacity to operate as instruments for extending the frontiers of basic science knowledge and translating it into usable practice for non-scientist clienteles and disseminating it to user clienteles. They saw universities as being egalitarian and people oriented. As such they represent a sharp departure from the elitist views of the early and middle 19th century about what a university should be and do and who should attend them.

Since land grant university definers held that first of all a land grant university must be a university, the distinctive elements sometimes had to defer to other matters that make a university possible. This meant that general concepts were sometimes rated as more important than those regarded as distinctive.

Sixteen of the 72 elements or concepts were selected by the definers as distinctive. First and foremost they saw a land grant university as being a sanctuary for the greatest diversity of thought, the freest exchange of ideas, the most painstaking search for truth, and thus a repository of scientific knowledge second to none; also that a public university should provide continuing education for adults not in residence as students (see Table 1). These were closely followed by a strong egalitarian philosophy reflected in a strong belief that there are extraordinary possibilities in ordinary people and in disdain for an elitist view that a university should cater only to highly competent students. The people orientation was further exemplified by a very high emphasis on maintaining two-way traffic of ideas and influence between the university and the people in the state and a feeling that information from research done at the university should be freely accessible to all.

To achieve these public service obligations the definers saw a need for integrated research, resident teaching, and extension programs that supplement and draw upon each other with all three organizationally a part of the university and under its control. This, of course, would make it possible for abstract knowledge developed there to be transformed and flow outward -- after local adaptive testing -- to all points of practical concern to the people.

To facilitate knowledge accrued at the basic science level, they would recommend a system of idea exchange among basic scientists throughout the world.

Somewhat secondarily but important nevertheless, was the charge that land grant universities should create an understanding of the nature and consequences of change forces and conditions operating in society. The objective

being to find solutions to the major economic, social and poltical problems of the day, and to serve ultimately as guides to policy and action. They further recognized a special obligation to the economically disadvantaged areas and people of the state but in a somewhat lower order of priority.

A contention that scholars in a university should be expected to work on research projects of applied concern even though it is not what challenges them most was held in considerable doubt. Perhaps one dean best expressed it. The faculty, he said, should be engaged in such research but there ought to be a better reason.

From the Diffusion Indicators

We return now to our two diffusion indicators, namely, (1) socialization of the faculty into the land grant university way of thinking, and (2) the relative acceptance of specific concepts in relation to the land grant university ideal type.

Socialization into the Ideal Typical Way of Thinking. With land grant universities antedating the tenure of the present faculty, many of whom received their advanced degrees in them, also with those on the Columbia Campus being presently employed in a land grant university, it seemed that at least some would be socialized into this ideal type way of thinking. Although on the Taiwan campuses there is no land grant university tradition, diffusion of basic concepts (ideas and philosophy) was possible through faculty exchange with American universities and graduate training abroad. On the other hand, the basic conditions out of which such universities evolved were somewhat similar. Public universities and their faculties were and still are expected to make a contribution to national planning objectives much as the faculties in land grant universities here were and still are expected to provide informational services to the public.

On the Columbia Campus. With this in mind, we turn to the view types that emerged on the Columbia Campus and how many of the faculty tended to be of each type. We have already suggested that Land Grant University Traditionalizers (third type) -- was the only one that approximated the land grant university ideal type. But only 10 of the 125 social science faculty were basically of this thought (see Table 2).

Although "luke warm" and a bit traditional in their views, they were most consistent with the ideal in accepting the concepts which collectively make it possible for a university to extend the frontiers of scientific knowledge, transform and deliver a portion of it after adaptive testing to non-scientist users, with social and economic betterment in view. Yet, commitment to such propositions as "extraordinary possibilities in ordinary people," concern for other than the most capable students, and for providing continuing education to persons outside of the university was far less emphasized than in the ideal. In fact, the commitment seemed to be mostly to the university system with elitism prevailing over egalitarianism.

With the most predominant faculty type being academic elitists, in which land grant university concepts were secondarily accepted, there can be little claim for socialization of the social science faculty into the land grant university way of thinking.

On the Taiwan Campuses. Quite in accord with the limited potential for exposure to land grant philosophy, the diffusion and/or acceptance of the basic concepts were even less manifest in the Taiwan campuses. Even though Critical Servant (Type Three) again approximated the ideal somewhat, only 42 of the 103 faculty tended to be of this type (see Table 2). Critical servants were favorable to the functional inclusion and organizational control of research, extension and resident teaching and to maintaining interactive

TABLE 2

SOCIAL SCIENCE FACULTY ON THE COLUMBIA AND TAIWAN CAMPUSES CLASSIFIED BY FACULTY TYPE AS DEFINED BY FACTOR ANALYSIS OF Q-STATEMENTS ABOUT WHAT A UNIVERSITY SHOULD BE AND DO

Faculty Types	Campus	
	Columbia (University of Missouri)	Taiwan NTU and Chunghsing
Academic Elites (scholarly critics)	103	X
Establishment Oriented (society servants)	12	X
Land Grant University Traditionalizers	10	X
Subservient Society Servants	X	54
Autonomous Critics (academic elites)	X	7
Critical Society Servants (closest to land grant univeristy view)	X	42
Total	125	103

contact with people in the state but deviated greatly in confidence expressed in the potential of ordinary people and students of less than top level intellectual ability. Critical servants, like the land grant university ideal, were favorable but less dedicated than the ideal to understanding the change forces and conditions operating in society. But they were negative rather than positive to providing adult education outisde of the university system.

On these campuses the subservient servants predominated. They were perhaps most characterized by a strong feeling that university should promote a sense of national unity and consciousness and that the research done by the faculty should be mainly determined by the social, political and economic needs of the state. Thus the land grant university ideal type was approximated only among the critical servants.

The general conclusion is that no thought type emerged that closely approximated the land grant university idealized way of thinking. The predominance on the Columbia Campus of academic elites who secondarily accepted basic land grant university concepts is evidence to the contrary and supportive of hypothesis three which holds that activities and functions most respected and deferred to by academia will be more fully accepted than those catering to public needs. The predominance of subservient society servants on the Taiwan campuses indicates a faculty concern with social, political and economic concerns of the state not centrally at issue in this study and only one component of the land grant university way of thinking.

Finally, there was little support for hypothesis one. There were virtually no faculty clearly socialized into the land grant university ideal typical way of thinking. But despite the absence of faculty types clearly socialized along these lines, secondary and occasionally strong acceptance of some of the concepts occurred. This can best be detected in assessment more focused

on how the acceptance of specific concepts deviated from the constructed ideal type (Q-sort).

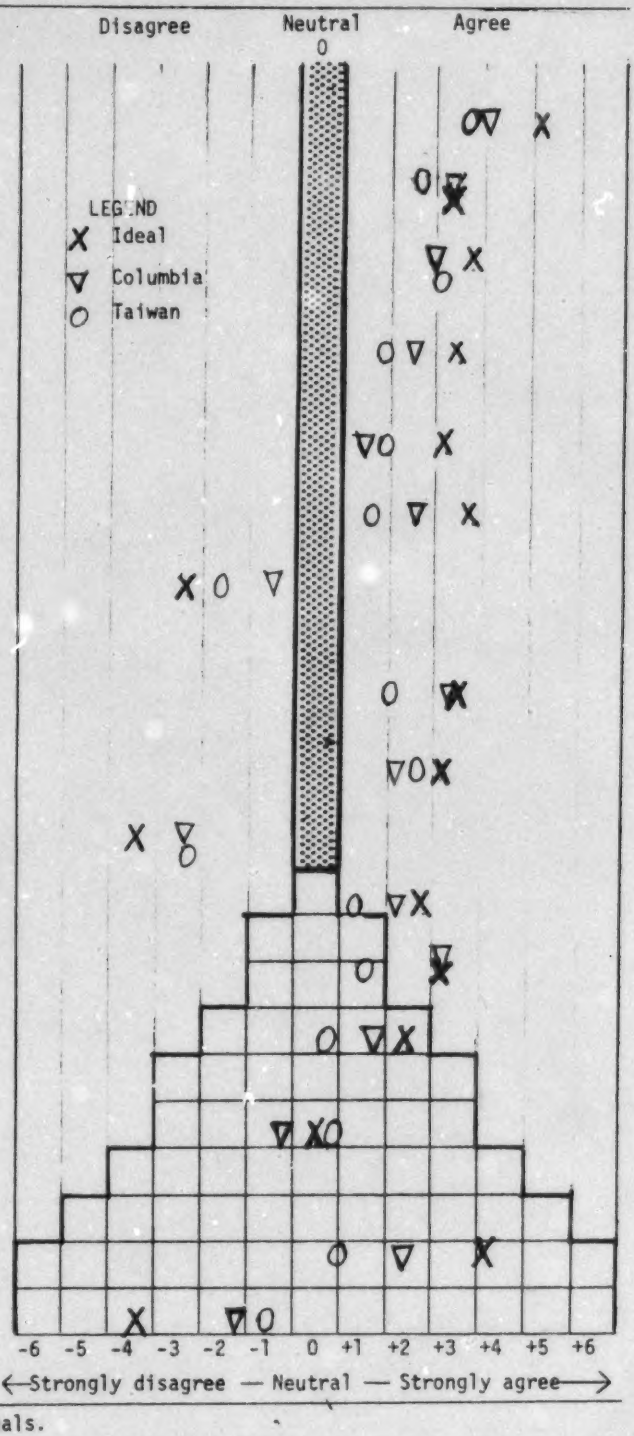
Acceptance of Concepts in Relation to the Ideal Typical Way of Thinking. On the Columbia Campus -- a second general hypothesis was that acceptance of land grant university concepts on the Columbia Campus would be higher than on the Taiwan campuses. This proved generally to be the case (see Table 1). Except for the peripheral contention that faculty in a university should be required to do research on applied concerns even though this is not what interests them most, they were positively inclined to all of them. This was true even and indeed most true for the highly elitist view (academically) that a university must first of all be a sanctuary of the greatest diversity of thought, the freest exchange of ideas, the most painstaking search for truth and thus a repository of scientific knowledge second to none. This was the concept labeled as most salient by the land grant university concept definers (see Figure 1).

Largest deviation in favorability -- meaning less favorable than the ideal centered around lack of faith in the intellectually less competent students and ordinary people and in providing for their educational needs in and outside of the university. This was reflected in being much less negative to "not providing" continuing adult education to people outside the university and considerably less positive than in the ideal sort to maintaining two-way communication with people in the state and to finding solutions for the major social, economic and political problems of society.[7] All of this in support of the second hypothesis; namely that concepts most compatible academically would be more accepted than those requiring deference to the public -- less compatible.

FIGURE 1

COLUMBIA AND TAIWAN CAMPUS SOCIAL SCIENTIST RATINGS ON LAND GRANT UNIVERSITY CONCEPTS COMPARED TO THEIR PLACEMENT IN THE IDEAL SORT

Land Grant University Concepts (Views)*	Placement in the Q-sort
INFORMATION SYSTEM	
Free thought, idea exchange with accumulation of knowledge second to none.	
Promote worldwide system of communication among basic scientists.	
Functionally integrate research, resident instruction, and extension.	
Operate as a knowledge generating-translating system from basic science to use.	
Organizationally contain and control research, resident instruction and extension.	
Provide two-way communication between faculty and the public.	
Leave testing of innovations for local adaptability to others.	
SERVICE	
Create understanding of change forces and consequences.	
Find solutions to major economic, social and political problems for future guidance.	
Leave continuing education for adults outside of the university to others.	
Help government agencies improve economic and social conditions.	
Make research information from university freely available to all.	
Have special obligation to extend knowledge and services to economically deprived.	
Faculty should be expected to do research on applied concerns even if not of most interest to them.	
PEOPLE ORIENTATION	
Are extraordinary possibilities in ordinary people preposition.	
Be concerned with educating highly competent students academically only.	



*View statements are abbreviated from originals.

The faculty were more in accord with providing for and maintaining functionally integrated research, resident teaching, and extension programs than on the necessity for organizational inclusion and control from the university; but again less than the ideal. They were in full accord with the idea of free public access to all information available from research done at the university and to participating in creating a worldwide system of communication and idea exchange among basic scientists of the world. They were also in very close agreement on the need for creating an understanding of the change forces and conditions that operate in society and the consequences of what we are perhaps inadvertantly becoming.

Thus, while accepting land grant university concepts, they regarded them as secondary to the society critic role, and to the unrestrained search for academic truth. While agreeable to helping state and federal agencies improve the social and economic conditions of local communities with some obligations also to the economically and socially disadvantaged, they insist on maintaining a basically elitist stance in the society critic and information supplier roles without much feeling of need for information feedback and interaction with the public.

By the Taiwan Social Scientists. The Taiwan social scientists, somewhat in contrast to the Columbia Campus were less focused in intensity of feeling about what a university should be and do and much in contrast they felt that the university should promote a sense of national unity even to the point of helping communicate and preserve the basic national values. This was supplemented by a belief that the research done should be primarily determined by the social, political and economic needs of the state. Any views held about the importance of land grant university concepts thus had to defer to the high priority assigned to concept supportive of

the basically uncritical society service role.

Although generally favorable to the land grant university concepts having to do with the operation of the university as an information system at the academic elitist end of a theory to practice continuum, they were less so than the land grant university ideal type. They, most of all, favored the university being a sanctuary for the greatest diversity of thought, the freest exchange of ideas, the most painstaking search for truth and thus a repository for knowledge second to none, to the university participating in creative worldwide systems of communication and idea exchange among basic scientists and to the university being a true knowledge system in which highly abstract information developed, there is transformed and flows downward to all points of practical concern to the people. Favorability even extended to providing a two-way traffic of ideas and influence between the university and the people in the state. They were moderately agreed to such service obligations as: (a) creating an understanding of the change forces and conditions operating in the Taiwan society, (b) finding solutions to the major economic, social and political problems of the day, and even (c) to providing continuing education for adults outside of the university system. But all were favored with much less emphasis than in the land grant university ideal.

Both faith in and sensitivity to people needs in contrast to government or the generalized larger society were basically lacking. Most of all they downgraded the proposition that there are extraordinary possibilities in ordinary people and next most any contention that the faculty should be concerned with any but the most intellectually capable students. Although agreeable that the research information developed at the university should be freely available to the public, they were by no means committed in the land

grant university sense nor were they any more than mildly tolerant to any special obligation to the social and economically disadvantaged segments of society. Thairs, indeed, was a stance of academic elitism with a willingness to defer to the needs of state and nation but not to the ordinary citizen as a primary focus.

To be sure there were exceptions, but they were indeed exceptions. Just as those who approximated the land grant university ideal type on the Columbia Campus were few in number, those on the Taiwan campuses were even fewer. Those who did so ascribe were indeed deviants to the generally prevailing faculty norms.

4. Summary Analysis and Conclusions

The capacity for a university to translate science research into a form usable for non-scientist user clienteles is newer than the resident teaching activity as is also the people orientation in contrast to the elitist view that a college education is only for a privileged few. With the high concentration of expertise in the basic science in universities and a growing recognition that applied concerns must draw on the basic sciences there has been a developing compulsion from a potential consuming public and government planners for scientists employed in public universities to defer to some of the applied concerns of society. Although not always in agreement with the pressures exerted, they could not be totally unresponsive.

Since the ways in which a faculty are able to contribute their expertise are limited (Goldenweiser, 1933) universities in two social settings may in fact independently orient themselves to public service obligations and/or restructure the university system along similar lines to provide the informational services demanded. This would represent a case of independent social

invention in accord with Goldenweiser's (1933) limited possibilities principle.

Yet, with achievement of the "information systems" capacity originating in agricultural colleges in the United States and with contacts and idea exchange between these universities and the two Taiwan universities, the presence of an "information systems" capability is more likely to be the product of diffusion than of independent invention. The diffusion context of this study is based on this assumption.

Even so, it appears that a sizable contingent of the social science faculty in land grant universities do not know about or at least have not fully accepted many of the basic land grant university concepts. This tended to be the case for the social science faculty on both the Columbia and Taiwan campuses. Most concepts were only secondarily accepted, i.e., they were in general agreement but other things were regarded as much more important. In short, general socialization into the land grant university way of thinking had not occurred for any sizable segment of the faculty.

One wonders why. Perhaps the comparatively low status of agriculture and agricultural colleges -- the source of origin -- among many social scientists may have been a factor in not knowing or not taking the information system concepts seriously (Linton, 1936, 343). Paradoxically, a recent reorientation of sociology to the applied matters of society after a period of deliberate disassociation from such concerns seems more likely to be hailed by them as a new invention than diffusion of an orientation perfected in agricultural colleges in which agricultural economists and a handful of rural sociologists have long been associated.

But the problem addressed here is not why, but how much diffusion. As we look at relative acceptance of specific concepts with the land grant

university ideal type as the referent, we find that some concepts are more acceptable than others and that they are also more acceptable in one social setting than in another. Highest on the list in both campuses but still short of the land grant university ideal, was the elitist position that a public university should first of all be a sanctuary for the greatest diversity of thought, the freest exchange of ideas, the most painstaking search for truth and thus a repository of knowledge second to none. This the highest rated activity or concept in the land grant university ideal type, was firmly ascribed to by the faculty on both campuses. This concept perhaps is most acceptable of all to academia.

At the other extreme of likely acceptance by academia is deference to the public. Here greatest deviance from the land grant university ideal occurred. Although mildly favorable they fell far short of the ideal type rating on the belief that there are extraordinary possibilities in ordinary people and that universities should concern themselves with other than the most academically competent students.

Q-methodology is a method of opinion analysis that deals with priorities. From the foregoing we get some insight into what the priorities of the social science faculties were. For those on the Columbia Campus it was a critical stance toward society, autonomy and an opportunity to pursue academic truth without interference from any source. On the Taiwan campuses it was service to society mostly in deference to government and nation not to the general public. Although ordinary citizens may not have been held in intellectual contempt, they nevertheless were regarded as subjects, with whom to communicate but not to listen to. One would assume that the social science faculty on the Taiwan campuses were reasonably assured that what they had to offer might well benefit the public if they could understand and if they would indeed listen. Indeed the social science faculty on the Columbia Campus were not

entirely devoid of these views.

The faculty on both campuses were favorably disposed to making it possible for a university to transform information from the basic sciences into usable practice and getting it disseminated to the consuming public. It mostly was that a few other things were a great deal more important and certain other things were about equal.

Generally speaking, the social scientists on the Columbia Campus rated basic land grant concepts more favorably than those on the Taiwan campuses. This, of course, was in accord with the diffusion expectations. Deviation tended to be most on matters indicating little confidence in the ability of the general public to learn and benefit directly from what the university has to offer and not feeling much need for information feedback from them by the Taiwanese faculty. A reasonably strong feeling of special obligation to extend knowledge and services to the economically disadvantaged areas and peoples of the state was also relatively absent among the Taiwan social scientists.

Finally, in regard to the diffusion of (people university) concepts the authors have found reason to wonder whether this (probably labeled independent invention by the receptors) might not have proceeded further among social scientists in the so-called "ivory tower" universities than in the land grant universities. But all that can be said from this study is that the concepts at issue have achieved no more than secondary acceptance in the ones studied.

Methodologically the authors are of the view that assessing diffusion by noting the deviation of item ratings from their ideal typical placement in the Q-sort is likely to be more fruitful than using Q-methodology to assess the degree to which an adopter clientele is socialized into an ideal typical way of thinking, unless of course, the last is squarely at issue.

They do strongly feel that Q-methodology provides a way for effectively dealing with integration issues long recognized by anthropologists (Linton, 1936, 347-366; Malinowski, 1928, 37) but neglected by so-called diffusion researchers (Rogers and Shoemaker, 1968, 19-38) and that it also provides a means for assessing how intrinsic and extrinsic qualities of a complex innovation conceptually changes in the process of diffusing from a source of origin to its ultimate destination (Coughenour, 1968).

FOOTNOTES

1. The authors have been very ambivalent about the land grant university designation because it is very undescriptive of what such universities are mostly about and of their truly distinctive features. The last have to do with their people orientation and the way they have become organized to do research, carry out extension work and relate to the informational needs of the public. All of this has nothing to do with the conditions under which the land grant label got attached; namely, the provision of the Morrill Act (1862) to make grants of land to states, the income from which was expected to help build and maintain universities. Another more basic provision had to do with teaching agriculture and the mechanic arts to people in the respective states, and the implied people orientation.

2. A balanced block design was used for item sample selection of views (about a university) with activities (ivory tower - academic, governance, education, change agent, information system and service) on one dimension and a theory of practice dimension on the other.
In addition to depth interviews with those known to have diverse views about university role and function to maximize diversity, an exhaustive search was also made of many written sources, including Arlt (1970), Beardsley (1959), Ben-David and Zolocower (1962), Carnegie Commission on the Future of Higher Education (1971), Cohen and Hale (eds., 1966), Education and World Affairs (1965), Ellis (1966), Etzioni (1968), Evans (1968), Gardner (1965), Gerard (1957), Government of India (1966), Greeley (1967), Hefferlin (1969), Ingham (1966), Kerr (1964), Kristol (1968), McGarth (1961), Miles (1964), Perry (1971), President's Commission on Higher Education (1974), Reisman (1956), Rogers (1968), Steiner (1965) Thomas (1971), University of Missouri (1968), Vaughan (1973), Wedemeyer (1970), Whitehead (1929), Woolfe (1969).
A more detailed statement of the procedure used is available in a previous paper by the authors (1974).

3. The eight definers included two retired administrators, one of whom had written a history of the Columbia Campus land grant university and taught courses about the organization and operation of such universities. Another was regarded nationally as an authority on the subject. These and two others had been actively involved in disseminating land grant university concepts to other countries through the institution building efforts of the Columbia Campus University and/or had served on national committees for making projections on how this should be done; still another administrator was actively involved in administering research in the University and three were faculty members of distinction in matters of university organization and management. Academically they drew heavily from agricultural economics but also had representatives from animal husbandry, agronomy, history, and rural sociology.

4. Q-methodology is a method of opinion measurement that forces a respondent to sort views and beliefs in terms of how strongly he agrees or disagrees with them. This rating must be done in the context of the views and/or belief statements presented to him. The respondent is required to pick a relatively few (each usually written on separate cords) with which he most strongly agrees and disagrees and progressively more as he approaches the in-between, neutral position (see Figure 1). When completed, the items are rated into a near normal distribution which permits direct inferences about the way individuals rate specific items and for doing a factor analyses to determine types of persons in regard to the views they hold.

For a detailed treatment of the theoretical and methodological issues involved, the reader should consult Kerlinger (1967 and 1958) for a defense of the method and its theoretical underpinnings, its founding father and chief proponent (Stephenson, 1967).

Use of this method first of all requires a sample of views that exit about the matter at issue -- in this case, what a university should be and do. Selection can ordinarily best be made in terms of a design that includes an underlying theory and gradations of how central and ivews selected are to the ethos (deeply held beliefs) of the society. Perhaps the most basic requirement is that the items sample all existing opinions about the thing being measured. Secondarily, there must be a near plus-minus balance to avoid undo distortions in the forced sorting procedure.

The authors take the position that the total view sample -- in this case the 72 items -- constitutes the idea universe into which land grant university concepts, newer in point of time, must diffuse. They further assumed that where knowledgeable definers place the distinctive items -- 16 in number -- with reference to the total, marks the reference point for assessing the diffusion (relative acceptance) of the specific concepts labeled as distinctive by the knowledgeable definers. The procedure further assumes that a land grant university must first of all be a university which means that there may be other matters about university role and function that takes precedence over being distinctive and furthermore, that what is most distinctive is the total configuration which constitutes the idealized conceptual underpinning for the existence and operation of such a university.

Q-sorts are processed using the QUANAL program available from Professor Norman G. Van Tuvergen at the University of Iowa, School of Journalism, Iowa City, Iowa. The Q-sort of each individual is first correlated with all others resulting in a correlation matrix which in turn is factor analyzed using the principle-axis method. This subsequently undergoes Varimax (orthogenal) rotation resulting in factor (people) types statistically known as simple structure matrix. This series of operations is necessary to obtain the maximum number of pure loadings of persons on each factor. These loadings are again fed into the computer to obtain:

1. The z-scores of each of the items on all of the factors.
2. Factor arrays, i.e., arrangement of the items on each of the factors in terms of the magnitude of their z-scores.
3. Items that most discriminate one factor from all others in order of z-score magnitude.
4. Consensus items, i.e., those that all respondents agree or disagree with in order of z-score magnitude.
5. A correlation matrix among the factors abstracted.

Interpretation of Q-data is done on the basis of these five kinds of computer output.

5. To the extent possible the faculty were classified into types on the basis of how closely their Q-sorts (of the 72 university role and function items) correlated with a constructed Q-sort of the same items for each of the three faculty types. Persons clearly more correlated on one of the three types than the others were placed in the category where the correlation was highest. Those not clearly correlated strongly with any one of the types were classified on the basis of how they rated items most salient to defining each of the constructed types.

6. There are really no short cuts to the long ritual of empirically defining the diversity of views that faculty on a university campus have about what a university should be and do. But doing this plus defining the land grant university ideal type in terms of the view universe are both lengthy prerequisites to determining: (1) whether any of the types approximate the land grant university ideal, and (2) how many faculty tend to be classified on such a type should it exist. We have briefly described the method used for doing both; the types abstracted by factor analysis and the university ideal type defined in terms of concepts regarded as distinctive by knowledgeable definers. The results provided the basis for an easy conclusion that only one type on the Columbia Campus remotely looked like the land grant university ideal.

   Ideally, from a methodological point of view, we should have presented how all six faculty types (three on each campus setting) rated the 16 land grant university views labeled as distinctive by the definers in comparison to the way these items were rated in the land grant university ideal type. Then the reader could have drawn his own conclusions about how closely the abstracted types approximated the constructed ideal type. But this would have required several more pages of explaining, all to finally conclude the socialization technique of measuring diffusion was not a viable approach for this study.

   Use of the socialization approach in the first place was predicated on the assumption that the ultimate in the diffusion of concepts is internalization of a configuration of feelings and thoughts -- in this case, about the proper role and function of a land grant university. There would seem to be nothing short of action in relation thereto to be achieved as a diffusion goal.

7. This is indicative of an interpretive problem involving a double negative resulting from an occasional necessity for stating some essentially positive view in a negative way to achieve a balance of plus-minus statements in the sample of Q-sort items.

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APPENDIX TABLE 1

HOW VIEW STATEMENTS ABOUT WHAT A UNIVERSITY SHOULD BE AND DO WERE RATED BY THE SOCIAL SCIENCE FACULTY ON TWO TAIWAN AND ONE U.S. UNIVERSITY CLASSIFIED BY FUNCTIONAL ACTIVITIES

View and Classification	Ratings assigned on the Columbia Campus	Ratings assigned on the Two Taiwan Campuses
Ivory Tower		
1. Universities must be free from the service and instrumental demands of society so they can objectively pursue knowledge and truth.	-0.82	0.11
2. Professional schools concerned with certification are in conflict with intellectual inquiry and therefore should not be part of a university system.	-1.58	-1.13
3. The university should be a sanctuary for the greatest diversity of thought, the freest exchange of ideas, the most painstaking search for truth and thus a repository of scientific knowledge second to none.	4.93	3.66
4. A university at its best has to be indulgent, amused, seeking to know, but not to moralize, somehow vague rather than ready with absolute answers.	0.35	-3.85
5. Protect radical elements within from reactionary forces -- inside and out.	-0.06	-1.92
6. Be concerned only with highly competent students, academically. It is a waste of resources to try to educate the less capable students in a university.	-2.73	-1.65
7. Be discriminating appraisers and critics of society and its basic values.	2.67	1.77
8. Take a stand on major public policy issues.	-1.32	0.79
9. Help preserve and communicate directly the basic values of the society -- religious, moral, social, economic and political.	-0.18	0.73
10. Scholars in a university should be expected to work on research projects of applied concern even though the needed research is not what challenges them most.	-1.19	0.88

View and Classification	Ratings assigned on the Columbia Campus	Two Taiwan Campuses
11. Be guided in policy and action mainly by the humanitarian considerations.	0.95	0.35
12. Art, music and drama should be available at the university for students who can afford such amenities, but university resources should not be spent on extending these to the public.	-1.99	-2.47
Governance		
13. Should operate in accord with its own self-determined missions and responsibilities, subject only to general guidelines of public responsibility.	1.47	1.25
14. The faculty should remember they are employees of the university, and should be guided accordingly.	-0.61	-0.82
15. Each department should have maximum autonomy to develop its own programs, subject only to generally imposed quality and operational requirements.	1.39	2.89
16. When universities incur public disfavor, they should invoke their autonomy and insularity privileges for their protection rather than resorting to a show down power struggle.	-0.50	0.75
17. Accept research moneys from the military and private interests even though this may be regarded by some as an unacceptable biasing influence.	-0.26	-0.21
18. Exercise control over the personal lives of students, somewhat comparable to what parents would expect.	-3.39	-1.83
19. Dominance -- submission relationships within universities are incompatible with educational purposes and should be removed.	0.42	-0.11
20. External examinations of students should be provided as a means of exerting pressure to maintain quality academic standards.	-0.34	-2.71
21. The faculty should devise and administer its own rules of conduct subject to no other code than the law of the land.	-0.05	-0.13
22. Participatory democracy (in which everybody affected by a decision must have their say) creates a kind of instant and chronic politics that makes serious teaching and study impossible.	-0.75	-1.84

View and Classification	Ratings assigned on the Columbia Campus	Two Taiwan Campuses
23. Students should remember their business at a university is to learn. University government should be left to the faculty and the university administration.	-1.32	0.56
24. In the final analysis, the people that pay the bills of a university should -- through their representatives govern the campus.	-1.56	-4.76
Educator		
25. The need for teaching occupational skills is so great that we can't afford to worry about "trade school" criticisms.	-0.90	-0.98
26. Be much like an industrial firm with students as customers, and degrees for sale. If degrees are what students need, that is what universities ought to provide.	-3.55	-4.63
27. By their emphasis on physical science and technology universities have contributed heavily in creating environmental quality and resource utilization problems. Now they must require these sciences and technologies to solve these problems.	1.02	0.61
28. Undergraduate education should not be pre-anything. It should aim at educating the whole man, i.e., for education in the broadest sense.	1.39	1.20
29. Students should be required to participate in social and national service programs as a required part of their education.	-0.89	1.52
30. Mass media and their agents are most capable in helping people understand the here and now. Universities should concern themselves with matters of more fundamental importance.	-1.13	0.50
31. Inculcate a sympathetic understanding of the cultures and peoples of the world.	3.02	1.89
32. Be without walls, open to all who wish to enter or leave as they choose, to study what they wish, to propose and even receive credit for courses of their own making.	-0.93	-2.23
33. Promote a sense of national unity and national consciousness.	-1.03	1.91

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34. Be committed to the proposition that there are extraordinary possibilities in ordinary people.	2.55	0.98
35. Be mostly concerned in teaching with the "now happenings", real experience, genuine life and the like.	-1.60	1.66
36. Universities should teach facts, and let students develop their own values.	-0.92	1.76
Information System		
37. Provide for integrated research, resident teaching and extension programs that supplement and draw upon each other.	3.02	3.09
38. Provide people in each department who can apply at the point of social action (or use) that which scientists in the university have discovered.	1.22	1.35
39. Provide two-way traffic of ideas and influence between the university and the people of the state largely through contacts with them, both direct and indirect.	2.69	1.56
40. Leave testing of innovations for local adaptability to persons and agencies. It is a waste of university faculty time to be concerned with such matters.	-1.42	-2.59
41. Every university faculty member should be a teacher, researcher and extension worker.	-1.12	0.90
42. Universities must be a true knowledge system, in which highly abstract information developed in the university is transformed and flows downward to all points of practical concern to people.	2.66	1.87
43. Such things as extension work, resource utilization and community development, in which the university has special expertise, should be under its direction, not under some government department or agency.	1.29	-1.29
44. Extension, research and resident teaching must be organizationally a part of the university and under its control.	1.94	1.89

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45. Participate in creating a system of communication and idea exchange among basic scientists throughout the world. It is at this level of knowledge and theory that cross-cultural transfer of ideas is most possible.	3.30	2.82
46. Universities should recognize the writing on the wall. It's goodbye to departments -- the future is with interdisciplinary concepts and institutes.	-1.23	0.04
47. Make the university and its staff available to other colleges and universities in the state and nation; perhaps, even in some cases to universities in foreign countries.	2.37	0.85
48. Should not provide continuing education for adults outside the university. This should be left to other agencies.	-2.28	-2.15
Change Agent		
49. Experiment boldly in the whole area of human relations, seeking to modify existing institutions and to discover workable new ones.	1.70	2.24
50. Find solutions to the major economic, social and political problems of the day and provide guidance for future policies and action.	2.18	2.64
51. Serve as a staging area of revolution and revolutionaries.	-4.34	-2.72
52. Require professors to spend some time every few years in the field, as a part of their continuing education and orientation.	0.57	1.73
53. Operate as an instrument of government to promote the national and state plans (or objectives) and national unity.	-3.72	-2.42
54. People should be cautious of advice from university professors on general issues of the day, for, professors are generally not sufficiently informed about things outside of their own specialty.	-0.06	-0.39
55. Provide counsel and service on matters of university expertise, but limit them to professionals who are working with people concerned with their problems.	-0.81	-0.19

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56. Participate with state and federal agencies in helping communities improve their economic and social conditions.	2.17	1.29
57. Educational requirements and standards in the university should be the same for all students. Special aid and help for the economically or educationally deprived as a means of minimizing social injustices has no place in a university.	-1.78	-1.78
58. Create an understanding of the change forces and conditions that are operating in our society and the consequences of what we seem to be inadvertantly becoming.	3.46	2.01
59. Develop and test theories of change and development.	2.90	2.69
60. Limit university efforts in bringing about economic and social change to teaching and research on important problem issues of the day.	-0.90	-1.68
Service Imperative		
61. Provide on-campus opportunities for corporations and government agencies to recruit graduates quite aside from the moral issues that some may think are involved.	0.58	-0.62
62. Provide specialized advisory services for all those who ask for it, but be little concerned about those who don't.	-1.82	-2.26
63. Information derived from its research should be freely accessible to all. Limited access agreements have no place in a university.	3.38	1.63
64. University research and activities should be determined mainly by the social, political and economic needs of the state.	-0.78	1.39
65. Has a special obligation to extend its knowledge and services to economically disadvantaged areas and people in the state.	1.86	0.72
66. Sell its programs and services to the public (potential users) making use of communication and persuasion arts and skills as may be necessary.	-0.54	-0.42

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67. Should be essentially a training and research resource for the great professions like law and medicine; also the specialized manpower needs of society.	-1.87	0.58
68. Limit services to the public primarily to cultural events, e.g., concerts, and speakers on public issues.	-2.27	-2.62
69. Have strong competitive athletic programs which create espirit de corps and pride among students and the public.	-0.98	-0.13
70. Provide ROTC or cadet training as an option open to all students.	0.44	-2.40
71. Universities have no business sending faculty members to other countries to help them with their problems. We plenty of our own for them to work on.	-2.62	-2.12
72. Provide highly specialized services to the public, like rabies tests and specialized medical services on a cost basis when they are badly needed and not otherwise available.	0.28	-0.05